

Notice of Allowability

Application No.

10/688,331

Examiner

Maureen M. Wallenhorst

Applicant(s)

BACH ET AL.

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the RCE and amendment filed on May 30, 2006.
2. ☒ The allowed claim(s) is/are 1, 3-7, 21, 8-15, 17-19, 22 (renumbered 1-19).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Royal Craig on August 9, 2006.

On lines 10-11 of claim 8, the phrase "stopping flow when said optical detection system determines that a cell is at said predetermined position in said capillary" was deleted and replaced by the phrase --stopping flow of said fluid at said predetermined position in said capillary--. On line 12 of claim 8, the phrase "said individual cell" was changed to --an individual cell--. On line 13 of claim 8, the word --and-- was inserted after the semicolon.

On line 5 of claim 15, the phrase "causing said fluid to pass through an optical detection region" was deleted and replaced by the phrase --stopping said precision pump so as to cause said fluid to stop at an optical detection region in the capillary--. On line 8 of claim 15, the phrase "stopping said stepping precision pump when said particular desired cell is in a" was changed to --pulsing said precision pump to position said particular desired cell in a--. On line 9 of claim 15, the phrase "a cell exit port" was changed to --a closed cell exit port--. On line 12 of claim 15, the word "stepping" was deleted. At the end of line 15 in claim 15, the word --and-- was inserted after the semicolon.

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2. The following is an examiner's statement of reasons for allowance: Application serial no. 10/688,331 is being allowed since none of the prior art of record teaches or fairly suggests sorting cells in a fluid by causing the fluid to enter into a capillary with a pulsed-mode precision microdisplacement pump, stopping the pump so as to cause the fluid to stop at an optical detection region positioned in proximity to the capillary, wherein the optical detection system exposes the fluid to light of a predetermined wavelength to detect a particular desired cell in the fluid, pulsing the pump to position the particular desired cell in proximity to a closed cell exit port, applying a magnetic field to a magnetostrictive actuator rod causing the closed exit port to open, pulsing the pump to cause a microdisplacement of the particular desired cell to pass through the open exit port, and removing the magnetic field from the magnetostrictive actuator rod, thus causing the cell exit port to close once more. None of the prior art of record teaches or fairly suggests synchronizing both a magnetostrictive gate and an optical detection system with a pulsed-mode precision microdisplacement pump, or stopping fluid flow in a cell sorting device when a particular cell is at a predetermined position for cell detection.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 571-272-1266. The examiner can normally be reached on Monday-Thursday from 6:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maureen M. Wallenhorst
Primary Examiner
Art Unit 1743

mmw

August 10, 2006

Maureen M. Wallenhorst
MAUREEN M. WALLENHORST
PRIMARY EXAMINER
GROUP ~~1700~~ 1700